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# California Regional Water Quality Control Board

## North Coast Region

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### FACT SHEET

#### Smith River Plain Groundwater and Domestic Well Monitoring

Between 1982 and 1985 the North Coast Regional Water Quality Control Board (Regional Water Board) conducted a planning program concerning the Smith River Plain area in Del Norte County. The planning effort was funded under Section 208 of the Federal Clean Water Act, and documented groundwater contamination in the Smith River Plain area from two toxic pesticide ingredients used in lily bulb farming. The two chemicals were aldicarb and 1,2 dichloropropane (1,2 DCP), an ingredient in D-D soil fumigant. The Del Norte County Agricultural Commissioner suspended the use of aldicarb and D-D soil fumigant in 1983, shortly after the contamination was found.

Also in 1983, the Department of Pesticide Regulation (DPR) (then a division of the California Department of Food and Agriculture) developed a well inventory database to track reliable information on the occurrence of non-point source contamination of groundwater by the agricultural use of pesticides in California. DPR provides annual updates of the well inventory database information to the legislature including results for Del Norte County. Copies of the DPR annual reports can be viewed at <http://www.cdpr.ca.gov/docs/wellinv/wirmain>.

In 1986 the Regional Water Board began a federally funded program, under Section 205(j) of the Clean Water Act, titled *Groundwater Pollution by Pesticides on the Smith River Plain, Del Norte County*. In 1987 the Regional Water Board contracted with the Department of Water Resources to conduct a regional assessment of hydrogeologic conditions in the Smith River Plain, and the study resulted in a report entitled *Smith River Plain Groundwater*

*Study*. These efforts were designed to develop adequate information for use in preventing further groundwater contamination from pesticides used in lily bulb production. Throughout the study period, the Regional Water Board conducted extensive outreach among residents, farmers, and dairy producers in the area. Several public meetings were held in the Smith River area to inform interested parties of progress, and report on continued findings of ground water contamination. The results of the Regional Water Board's 205(j) study were compiled in a final report entitled *Groundwater Pollution by Pesticides on the Smith River Plain, Del Norte County, March 30, 1989*. This report was widely distributed and indicated that groundwater monitoring during the study continued to detect pesticides, which had been banned in the early 1980s. The March 1989 report also contained recommendations; summarized below:

- Continued groundwater monitoring for known and potential new pollutants;
  - Evaluation of nematicides applied to the root zone for soil leaching potential;
  - Research by registrants for new or replacement chemicals to minimize leaching of pesticides to groundwater;
  - Use of computer modeling to evaluate risks to groundwater posed by new chemicals, replacement chemicals, or new farming areas in the Smith River Plain;
  - Additional computer modeling of potential chemical breakdown products.
- Since 1989 the Regional Water Board has intermittently monitored individual wells in

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the plain in response to individual concerns. In order to generate more current data and identify any potential ongoing groundwater concerns, the Regional Water Board staff collected groundwater samples from three domestic wells in the Smith River Plain on August 29 and 30, 2001.



Smith River Plain 1986

The samples were analyzed for numerous pesticide-related analytes including organophosphorus pesticides, methyl isothiocyanate (MITC), dithiocarbamates as ziram, pentachloronitribenzene (PCNB), N-methyl-carbamoyloximes and carbamates, volatile organic compounds, copper, and nitrates (as nitrogen). Groundwater from only two of the three wells was analyzed for 1,2 DCP due to bottle breakage during transport to the laboratory. Of the analytes tested, only nitrates and 1,2 DCP were reported above the laboratory detection limits. Only water from one of the sampled wells indicated the presence 1,2-DCP, which was reported at 0.79 ug/l. Nitrates were detected in all three wells ranging between 0.56 mg/l and 9.5 mg/l. Regional Water Board staff provided written copies of the results to the owners of all three wells sampled and copies were forwarded to the Del Norte County Health Department and the State Department of Health Services.

On February 21, 2002, representatives of the *Smith River Project* provided groundwater analytical results from three domestic wells, which they had reportedly sampled on December 5, 2001. The samples were analyzed for volatile organic compounds. The results indicated that 1,2 DCP was detected in all three samples ranging from 0.71 ug/l to 1.5 ug/l.

California Public Health Goals (PHGs) represent levels of contaminants in drinking water that pose no significant health risks to individuals consuming the water on a daily basis over a lifetime. The PHG for 1,2 DCP is 0.5 ug/l. The PHG for nitrate is 10 mg/l.

Regional Water Board staff will conduct continued monitoring efforts in the Smith River Plain area from June 25 to June 28, 2002. Additional periodic evaluation and monitoring of the Smith River Plain area groundwater water quality will continue in the future as funding and resources allow.

If you have a well on your property that you wish to have sampled, have questions, or would like additional information about this investigation, you may contact Lisa Bernard of the Regional Water Board by telephone at (707) 576-2677 or on the internet at [bernl@rb1.swrcb.ca.gov](mailto:bernl@rb1.swrcb.ca.gov).

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